

Course Description Template

1. Module Name: Hydraulic Structures I	
2. Module Code: CE418	
3. Semester / Year: Semester	
4. Date of Preparation of this Description: 15/9/2024	
5. Available Attendance Formats: In-person only	
6. Total Credit Hours / Total Units: Total hours 48 (30 theoretical + 15 practical) Total units 2	
7. Name of the Course Coordinator (if there are multiple names): Name: Eng. M. M. Wurood Hussein Email: wurood.hussien@uowa.ed.iq	
8. Module Objectives:	Module Objectives
<ul style="list-style-type: none"> • Identify and understand the basic terms and concepts related to hydraulics and hydraulic structures, such as pressure and discharge, etc. • Understand the process of designing and constructing hydraulic structures, including material selection, dimensions, capacities, and determining suitable locations for hydraulic projects. • Evaluate the performance of hydraulic structures and examine the factors that may affect their efficiency and sustainability. • Assess the costs and benefits of hydraulic projects and examine the economic aspects of their implementation. • Develop the ability to think analytically and solve problems related to hydraulics and hydraulic structures. • Achieving these objectives contributes to qualifying students or 	

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professionals to understand and apply the principles and techniques of hydraulics in practical projects.						
9. Teaching and Learning Strategy						
<input checked="" type="checkbox"/> Presentations <input checked="" type="checkbox"/> Paper lectures and scientific resources <input checked="" type="checkbox"/> Practical lectures at work sites						Strategy:
10. Module Structure						
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week	
<input type="checkbox"/> Exams <input type="checkbox"/> Assignments <input type="checkbox"/> Reports <input type="checkbox"/> Exams + Participation	In-person	Hydraulic Structures	Introduction to Hydraulic Structures	2	2-1	
			Seepage under Hydraulic Structures -Bligh's Creep Theory -Lane's Weighted Creep Theory -Khosla's Theory -thickness of floor-	8	7-3	
			The Regulators -Type of regulator -The hydraulic design of regulator	4	9-7	
			Hydraulic Jump	2	10	
			Drop structure -Vertical drop -Inclined drop -Piped drop	4	12-10	
			Stilling Basins -Advantages, Froud , Types	4	14-12	
			Protection of approaches for concrete floors -Downstream Protection. -up stream Protection.	4	16-14	
11. Module Evaluation						
<input checked="" type="checkbox"/> 10 points (Daily preparation, daily and oral exams, homework, and classroom activities) <input checked="" type="checkbox"/> 30 points (Monthly exams) <input checked="" type="checkbox"/> 60 points (Final exam)						
12. Learning and Teaching Resources.						
San Tosh, Kumar Garg,1998: Irrigation Engineering and Hydraulic Structures.				Required	Textbooks	(if

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	applicable)
Chow.V.T.1960: Open Channel Hydraulic. Mcgraw-Hill, New York	Main References (Sources)
	Recommended Supporting Books and References (current journals, reports, etc.)
	Electronic References, Websites

